ENGINEERING PHYSICS (ELECTRICAL ENGINEERING) - BACHELOR OF SCIENCE IN ENGINEERING PHYSICS

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1511G Calculus and Analytic Geometry I and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and English. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change. Full-time students are usually required to take at least 15 credits per semester. This requirement could be satisfied for example by taking a one-credit supplemental instruction course.

First Year		
Semester 1		**Credits**
ENGL 1110G	Composition I [1]	4
ENGR 120	DC Circuit Analysis	4
MATH 1511G	Calculus and Analytic Geometry I [1]	4
PHYS 2110 & 2110L	Mechanics and Experimental Mechanics [1,2]	4
	Credits	**16**
Semester 2		
ENGR 130	Digital Logic	4
ENGR 140	Introduction to Programming and Embedded Systems	4
MATH 1521G or MATH 1521H	Calculus and Analytic Geometry II [1] or Calculus and Analytic Geometry II Honors	4
PHYS 2140 & 2140L	Electricity and Magnetism and Electricity & Magnetism Laboratory [1,2]	4
	Credits	**16**
Second Year		
Semester 1		
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	4
ENGR 230	AC Circuit Analysis	4
MATH 2530G	Calculus III [1]	3
PHYS 2120 & 2120L	Heat, Light, and Sound and Heat, Light, and Sound Laboratory [1]	4
	Credits	**15**
Semester 2		
E E 200	Linear Algebra, Probability and Statistics Applications [1]	4
ENGL 2210G	Professional and Technical Communication Honors	3
MATH 3160	Introduction to Ordinary Differential Equations [1]	3
PHYS 315	Modern Physics [1]	3
PHYS 325	Intermediate Experimental Physics	3
	Credits	**16**
Third Year		
Semester 1		
COMM 1115G	Introduction to Communication	3
PHYS 395	Intermediate Mathematical Methods of Physics [1]	3
PHYS 451	Intermediate Mechanics I [1]	3
PHYS 461	Intermediate Electricity and Magnetism I [1]	3
Area V: Humanities Course [3]		3
	Credits	**15**
Semester 2		
E E 317	Semiconductor Devices and Electronics I [1]	4
Choose from one of the following:		3-4
PHYS 462	Intermediate Electricity and Magnetism II [1]	
E E 340	Fields and Waves [1]	
Choose from one of the following:		3
PHYS 475	Advanced Laboratory Practices for Materials [1]	
PHYS 493	Experimental Nuclear Physics [1]	
PHYS 471	Modern Experimental Optics [1]	
Area IV: Social and Behavioral Science Course [3]		3
	Credits	**13-14**
Fourth Year		
Semester 1		
PHYS 454	Intermediate Modern Physics I [1]	3
E E 320	Signals and Systems I	3
ENGR 401	Engineering Capstone I	3
VWW: Viewing a Wider World Course [4]		3
Technical Elective Course [5]		3
	Credits	**15**
Semester 2		
PHYS 455	Intermediate Modern Physics II [1]	3
PHYS 480	Thermodynamics	3
ENGR 402	Engineering Capstone II [1]	3
Area VI: Creative and Fine Arts Course [3]		3
VWW: Viewing a Wider World Course [4]		3
	Credits	**15**
	Total Credits	**121-122**

1. These courses may have prerequisites and/or co-requisites, and it is the students responsibility for checking and fulfilling all those requirements.
2. PHYS 2110 Mechanics/PHYS 2110L Experimental Mechanics and PHYS 2140 Electricity and Magnetism/PHYS 2140L Electricity & Magnetism Laboratory will not automatically count towards the Area III: Laboratory Science requirement, an exception will be made if students elect to take these courses.
3. See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses.
4. See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses.
5. Technical electives are approved by the Engineering Physics advisors